

REMARKS

Claims 1-16, 18-34, 36-41, 44, 45 and 59-72 are resubmitted for reconsideration without amendment in the light of the following authorities and remarks.

The office action states:

Claims 1-3, 5-7, 9, 11-13, 15, 16, 18-22, 24-28, 30-32, 34, 36-41, 59-65, 67-69, 71, and 72 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Song et al. (US 7,087,342).

Song et al. disclosed, as shown in fig. 1-3, a vehicle suspension system comprising: electronic control module 4, actuator 6,8,10,12 comprising switch circuitry 14 powered by energy from movement of the actuator to passively damp the actuator, that is directly conveyed to the switch circuitry from electric terminals of the actuator wherein the electronic control module 4 which is part of the electric switch 14.

Song et al. was silent to disclose to passively damp the actuator during a failure of a power supply for providing power to the actuator.

Song et al. disclosed a passive damper that will be operational by itself even the power supply such as the battery fails. Song et al. also disclosed, as shown in fig. 3, several options for the switching circuit. Pp. 2-3.

This ground of rejection is respectfully traversed.

“It is well settled that anticipation under 35 U.S.C. 102 requires the presence in a single reference of all of the elements of a claimed invention.” *Ex parte Chopra*, 229 U.S.P.Q. 230, 231 (BPA&I 1985) and cases cited.

“Anticipation requires the presence in a single prior art disclosure of all elements of a claimed invention arranged as in the claim.” *Connell v. Sears, Roebuck & Co.*, 220 U.S.P.Q. 193, 198 (Fed. Cir. 1983).

“This court has repeatedly stated that the defense of lack of novelty (i.e., ‘anticipation’) can only be established by a single prior art reference which discloses each and every element of the claimed invention.” *Structural Rubber Prod. Co. v. Park Rubber Co.*, 223 U.S.P.Q. 1264, 1270 (Fed. Cir. 1984), citing five prior Federal Circuit decisions since 1983 including *Connell*.

In a later analogous case the Court of Appeals for the Federal Circuit again applied this rule in reversing a denial of a motion for judgment n.o.v. after a jury finding that claims were anticipated. *Jamesbury Corp. v. Litton Industrial Prod., Inc.*, 225 U.S.P.Q. 253 (Fed. Cir. 1985).

After quoting from *Connell*, "Anticipation requires the presence in a single prior art disclosure of all elements of a claimed invention arranged as in the claim," 225 U.S.P.Q. at 256, the court observed that the patentee accomplished a constant tight contact in a ball valve by a lip on the seal or ring which interferes with the placement of the ball. The lip protruded into the area where the ball will be placed and was thus deflected after the ball was assembled into the valve. Because of this constant pressure, the patented valve was described as providing a particularly good seal when regulating a low pressure stream. The court quoted with approval from a 1967 Court of Claims decision adopting the opinion of then Commissioner and later Judge Donald E. Lane:

[T]he term "engaging the ball" recited in claims 7 and 8 means that the lip contacts the ball with sufficient force to provide a fluid tight seal. *** The Saunders flange or lip only sealingly engages the ball 1 on the upstream side when the fluid pressure forces the lip against the ball and never sealingly engages the ball on the downstream side because there is no fluid pressure there to force the lip against the ball. The Saunders sealing ring provides a compression type of seal which depends upon the ball pressing into the material of the ring. *** The seal of Saunders depends primarily on the contact between the ball and the body of the sealing ring, and the flange or lip sealingly contacts the ball on the upstream side when the fluid pressure increases. 225 U.S.P.Q. at 258.

Relying on *Jamesbury*, the ITC said, "Anticipation requires looking at a reference, and comparing the disclosure of the reference with the claims of the patent in suit. A claimed device is anticipated if a single prior art reference discloses all the elements of the claimed invention as arranged in the claim." *In re Certain Floppy Disk Drives and Components Thereof*, 227 U.S.P.Q. 982, 985 (U.S. ITC 1985).

"The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification." *In re Gordon*, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984).

In KSR Int'l Co. v. Teleflex Inc., 82 U.S.P.Q. 2d 1385, 1396 (U.S. 2007), after stating the steps “in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent in issue”, the Court said, “To facilitate review this analysis should be made explicit.” See *In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006) (“[R]jections on obvious grounds cannot be sustained by mere conclusory statements, instead there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”).

“A fact finder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning. See *Graham*, 383 U.S., at 36 (warning against a “temptation to read into the prior art the teachings of the invention in issue” and instructing courts to “guard against slipping into the use of hindsight”)(quoting *Monroe Auto Equipment Co. v. Heckethorn Mfg. & Supply Co.*, 332 F. 2d 406, 412 [141 USPQ 549] (CA6 1964))). *Id.* 1397.

In *Ex parte Aylward*, (BPA&I, Appeal No. 2007-2368 December 4, 2007) the Board said in reversing a final rejection,

“Both anticipation under §102 and obviousness under §103 are two-step inquiries. The first step in both analyses is a proper construction of the claims . . . The second step in the analysis requires a comparison of the properly constructed claims to the prior art”. *Medichem, S.A. v. Rolabo, SL.*, 353 F. 3d 928, 933 (Fed. Cir. 2003) (internal citations omitted):

A. CLAIM CONSTRUCTION

“The Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art.” *In re Lowry* 32 F. 3d 1579, 1582 (Fed. Cir. 1994) (citing *In re Gulack*, 703 F. 2d. 1381, 1385 (Fed. Cir. 1983). Slip Op. Pp. 7-8.

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“In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness.” *In re Rijckaert*, 9 F.3d 1531, 1532 (Fed. Cir. 1993) (citing *in re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992)). “A *prima facie* case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art.” *In re Bell*, 991 F.2d 781,783 (Fed. Cir. 1993) (quoting *In re Rinehart*, 531 F. 2d 1048, 1051 (CCPA 1976)).

In *Ex parte Hamilton* (BPA&I Appeal No. 2007-3091, March 11, 2008) in reversing a final rejection the Board said:

The test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art. See *In re Kahn*, 441 F.3d 977, 987-88 (Fed. Cir. 2006), *In re Young*, 927 F.2d 588, 591 (Fed. Cir. 1991), and *In re Keller*, 642 F.2d 413, 425 (CCPA 1981).

The Examiner can satisfy this burden by showing some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *KSR Int'l. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007) (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)). Slip Op. Pp. 5-6.

The pertinence of the specification to claim construction is reinforced by the manner in which a patent is issued. The Patent and Trademark Office ("PTO") determines the scope of claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction "in light of the specification as it would be interpreted by one of ordinary skill in the art." *In re Acad. Of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). *Phillips v. AWH Corp.*, 76 U.S.P.Q. 1321, 1329 (Fed. Cir. 2005) (en banc).

Thus, the first ruling is a question of law on the interpretation of the rejected claims in the light of the specification as it would be interpreted by one of ordinary skill in the art. The courtesy of Supervisory Examiner Siconolfi and Examiner Sy in granting the telephone interview of 28 October 2008 is acknowledged with appreciation. During the course of the interview amendments were discussed in view of the Song and Miller references. It was understood that the amendments to the claims in the prior response would better distinguish the invention over these references.

The present claimed invention uses power generated by the actuator to cause the normally open switch, such as 79 in FIG. 2 to be closed. Paragraphs 40 and 41 of the published application reads as follows:

[0040] In order to provide the failsafe clamping function, circuit 77 should provide power to enable, by closing, the normally-open switch 79. This power can be provided by a storage device such as a battery or a capacitor. However, solutions that utilize a storage device are susceptible to failure if the storage device fails.

[0041] Another manner of providing power to enable the normally-open switch 79 is to use power associated with the back EMF. If the armature 14 is not moving relative to the stator 16, no damping force needs to be provided and the normally-open switch 79 can remain open. However, when the armature 14 begins to move relative to the stator 16, the switch 79 must be closed.

Energy from movement of actuator 12 is then conveyed directly to the switch circuitry, such as failsafe clamping circuit 77, to positively damp the actuator during a failure of the power supply such as electronics 54 that is for providing power to actuator 12.

The title of this application is "FAILSAFE OPERATION OF ACTIVE VEHICLE SUSPENSION."

Thus, claim 1 recites switch circuitry powered by energy, from movement of the actuator, that is directly conveyed to the switch circuitry from electric terminals of the actuator, the switch circuitry to positively damp the actuator during a failure of a power supply for providing power to the actuator. The same limitation is in independent claim 12 and independent claim 19. Independent claim 26 includes similar language calling for providing power to the actuator, generating a passive damping characteristic of the actuator using switch circuitry powered by energy, from movement of the actuator, that is directly conveyed to the switch circuitry from electric terminals of the actuator during failure of a power supply for providing power to the actuator. Independent claim 63 contains similar language calling for the switch circuitry to respond to a failure of a power supply for providing power to the actuator by performing a switching operation to achieve passive damping of the actuator during the failure, the switch circuitry being powered to perform the switching operation during the failure, directly by movement of the actuator.

The statement in the office action that the reference discloses "actuator 6, 8, 10, 12 comprising switch circuitry 14 powered by energy from movement of the actuator to passively damp the actuator," mischaracterizes what the reference discloses. There is a distinction between power flow controlled by the switch, and power required to actuate the switch. The reference does not disclose using the power flowing through the switch 14 due to actuator motion to enable the switch circuitry.

The reference discloses power generated by movement of the actuator flows from the actuator to switch 14 through control module 4. Control module 4 provides a signal causing switch 14 to change state based on various inputs. The reference does not disclose where the power comes from that powers control module 4 or that actually causes switch 14 to change state. The reference only discloses power generated in the actuator flowing through switch 14 into a resistance or into circuitry to charge a battery. The reference does not disclose the source of power for module 4 or switch 14 or what happens if that power source fails. Accordingly, withdrawal of the rejection of claims 1-3, 5-7, 9, 11-13, 15, 16, 18-22, 24-28, 30-32, 34, 36-41, 59-65, 67-69, 71 and 72 as anticipated by, or in the alternative under §103(a) as obvious over the reference is respectfully requested. If this ground of rejection is repeated, the Examiner is respectfully requested to quote verbatim the language in the reference regarded as corresponding to each limitation in at least each of the independent claims and suggesting modifying what is disclosed in the reference to meet the limitations of these rejected claims.

The office action states:

Claims 4, 14, 23, 29, 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Song et al.

Song et al. do not specifically disclose the use of solid-state electronics.

It would have been obvious to one of ordinary skill in the art to use solid-state electronics in the device of Song et al. since the use of solid-state electronics have many well known advantages such as lower power consumption, less cost to make, more reliable and more resistant to vibrations. P. 3.

This ground of rejection is respectfully traversed. We have shown above that the parents of these claims are neither anticipated by the reference nor are the differences between the reference and the parent claims such that the subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made. Accordingly, further discussion of this ground of rejection is submitted to be unnecessary. If this ground of rejection is repeated, the Examiner is respectfully requested to quote verbatim language in the reference regarded as suggesting the desirability of modifying what is there disclosed to meet the limitations in these claims.

The office action states:

Claims 8, 33, and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Song et al. in view of De Puy (US 4,314,327).

Song et al. failed to disclose the supplemental circuit comprises a bipolar Royer oscillator.

Depuy teaches the use of Royer oscillator.

It would have been obvious to one of ordinary skill in the art to use Royer oscillators, which are well known, into the system of Song et al., as taught by DePuy, as merely a design choice of selecting a well known element to perform a specific function. Pp. 3-4.

This ground of rejection is respectfully traversed. Claims 8, 33 and 70 are dependent upon claims 1, 26 and 63, respectively, and the reasoning set forth above in support of the patentability of the parent claims over the primary reference is submitted to support the patentability of these claims so that further discussion of the secondary reference is unnecessary.

Moreover these claims call for boosting the back EMF by a supplemental circuit that comprises a bipolar Royer oscillator capable of operating at an input voltage approximately 0.5 volt. The Examiner has failed to show any rational explanation of why one skilled in the art would put this combination together to meet the limitations of these claims. What the Examiner is doing is using the claims being rejected as a blueprint or template for attempting to read the claims being rejected upon the references. That approach is not a proper basis for a Section 103 rejection on a combination of references.

Here, the Examiner relied upon hindsight to arrive at the determination of obviousness. It is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious.¹⁵ This court has previously stated that "[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention."¹⁶ *In re Fritch*, 23 U.S.P.Q. 2d 1780, 1784 (Fed. Cir. 1992).

Moreover, the reference to "as merely a design choice of selecting a well known element to perform a specific function" is a conclusion, not a proper reason for maintaining the rejection.

In *In re Garrett*, 33 PTCJ 43 (BPA&I, September 30, 1986) the Board criticized the Examiner's statement that the proposed modification would have been "an obvious matter of engineering design choice" as a conclusion, not a reason, in reversing the Section 103 rejection.

And since we have shown above that the primary reference does not anticipate a parent claim, it is impossible to combine the references to meet the limitations of these rejected claims.

"Moreover, we observe that even if these references were combined in the manner proposed by the examiner, that which is set forth in appellant's claims . . . would not result." *Ex parte Bogar*, slip op. p.7 (BPA&I Appeal No. 87-2462, October 27, 1989). "Even if we were to agree with the examiner that it would have been obvious to combine the reference teachings in the manner proposed, the resulting package still would not comprise zipper closure material that terminates short of the end of the one edge of the product containing area, as now claimed." *Ex parte Schwarz*, slip op. p.5 (BPA&I Appeal No. 92-2629 October 28, 1992). "Although we find nothing before us indicating why it would be desired to combine the references in the manner urged by the examiner, it is clear to us that such a modification by itself would not result in that which is set forth in the claims." *Ex Parte Kusko*, 215 U.S.P.Q. 972, 974 (BPA&I 1981).

That it is impossible to combine the references to meet to limitations of these rejected claims is reason enough for withdrawing the rejection of them. Accordingly, withdrawal of the rejection of these claims is respectfully requested. If this ground of rejection is repeated, the Examiner is respectfully requested to quote verbatim the language in the references regarded as corresponding to each limitation in these rejected claims.

The office action states:

Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Song et al. (US 7,087,342) in view of Miller (US 5,296,785).

Song et al. was silent to disclose the use of the actuator during a failure and wherein the electronic control module is powered by a capacitor.

Miller teaches the use of a fail-safe damping rate for the suspension system and the electronic control module powered by a capacitor.

It would have been obvious to one of ordinary skill in the art to provide the system of Song et al. with a fail-safe damping rate for the suspension system and the electronic control module powered by a capacitor, as taught by Miller, in order to avoid failure to the suspension system of the vehicle. P.4.

Claim 45 is dependent upon and includes all the limitations of claim 26, and the reasoning set forth above in support of the patentability of claim 26 over the primary reference is submitted to support the patentability of claim 45 so that further discussion of the secondary reference is submitted to be unnecessary. However nothing in the secondary reference discloses power electronics powered by a large valued capacitor. Furthermore, since parent claim 26 is not anticipated by the reference as shown above, it is impossible to combine the references to meet the limitations of claim 45. Accordingly, withdrawal of the rejection of claim 45 is respectfully requested. If this ground of rejection is repeated, the Examiner is respectfully requested to quote verbatim the language in the references regarded as corresponding to each limitation in claim 45.

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In view of the foregoing authorities, reasoning and that previously presented, and the inability of the prior art alone or in combination to anticipate, suggest or make obvious the subject matter as a whole of the invention disclosed and claimed in this application, all the claims are submitted to be in a condition for allowance, and notice thereof is respectfully requested. Should the Examiner believe the application is not in a condition for allowance, he is respectfully requested to telephone the undersigned attorney at 617-521-7014 to discuss what additional steps he believes are necessary to place the application in a condition for allowance.

Please apply any charges or credits to deposit account 06-1050 under order no. 02103-0381001.

Respectfully submitted,
FISH & RICHARDSON P.C.

29 April 2009
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